



# OSWER Innovations Pilot

## ***Collecting and Recycling Used Computers Via the Reverse Distribution System***

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*The Office of Solid Waste and Emergency Response (OSWER) initiated a series of innovative pilots to test new ideas and strategies for environmental and public health protection to make OSWER programs more efficient, effective, and user-friendly. A small amount of money is set aside to fund creative proposals. The creative projects test approaches to waste minimization, energy recovery, recycling, land revitalization, and homeland security that may be replicated across various sectors, industries, communities, and regions. We hope these pilots will pave the way for programmatic and policy recommendations by demonstrating the environmental and economic benefits of creative, innovative approaches to the difficult environmental challenges we face today.*

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### **BACKGROUND**

Used electronic products are the most rapidly growing waste problem in the world. An estimated 20 million personal computers became obsolete in the United States in 1998, and an estimated 61 million personal computers will become obsolete in 2004. Electronic wastes contain numerous toxic substances, including lead, mercury, cadmium, copper, lithium, brominated flame retardants, and phosphorus. These toxic materials can be released to the environment as leachate from landfills or as air emissions from waste-to-energy facilities, posing a threat to human health and the environment.

The National Electronics Product Stewardship Initiative (NEPSI) is a discussion among electronics manufacturers, state and local government agencies, recyclers, and non-governmental organizations. The Product Stewardship Institute (PSI) coordinates the participation of 26 state agencies and 24 local agencies in this discussion. Retailers, who are a logical point for consumer education and product take-back programs, have not been active participants in the national discussion despite encouragement from other stakeholders. This pilot proposes to engage retailers in a manner that will assist in the development of a national solution to electronic wastes.

U.S. EPA Region 1, in partnership with Staples, Inc., the Product Stewardship Institute, and the States of Massachusetts and Connecticut, will test and measure reverse distribution as a unique strategy for funneling obsolete computers from consumers to recyclers rather than to disposal. The pilot will develop an electronics management system that shares responsibility among manufacturers, retailers, government, and non-governmental organizations. The collection and management of end-of-life electronics will be conducted through the same channels that bring these products to consumers.

Through this pilot, Staples, Inc. will conduct collections at retail stores in the company's Dayville, Connecticut distribution network; from corporate customers near its Putnam, Connecticut warehouse; and from Internet or mail order delivery customers serviced by its North Reading or Sharon, Massachusetts transportation hub. Pilot funds will be used to design the pilot, evaluate the data, and assess the suitability of the pilot system for national program expansion. If reverse distribution proves to be an efficient system, it could result in significant cost reductions for a national electronics management program.

### **PILOT APPROACH**

## **INNOVATION**

The pilot will study the costs for back-hauling used electronics through the reverse distribution network. Reverse distribution will collect old electronics through the same infrastructure that delivers the products to the consumer, making it convenient for participating households and businesses. This will be the first attempt to apply reverse distribution concepts to the electronics retail industry. It will provide a model for other retailers, and will be the first shared responsibility partnership between retailers and their suppliers.

## **BENEFITS**

This project will provide the first volume and cost data from a retailer regarding the collection and recycling of computer equipment through reverse distribution. The knowledge gained will be critical in designing a nationwide program that is economically and technically feasible. The pilot has the potential to positively change the management of used electronics and encourage retailers to play a greater role in taking responsibility for a national solution to the problem.

## **CONTACTS**

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For additional information, visit the EPA OSWER Innovations web site at: [www.epa.gov/oswer/IWG.htm](http://www.epa.gov/oswer/IWG.htm).